



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

*Am*

| APPLICATION NO.   | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|----------------------|---------------------|------------------|
| 09/955,860  | 09/18/2001  | Manickam R. Sridhar  | 09150-013001        | 9903             |
| 26161   | 7590        | 05/18/2005           | EXAMINER            |                  |
| FISH & RICHARDSON PC<br>225 FRANKLIN ST<br>BOSTON, MA 02110 |             |                      | TRAN, NGHI V        |                  |
|   |             |                      | ART UNIT            | PAPER NUMBER     |
|   |             |                      | 2151                |                  |

DATE MAILED: 05/18/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/955,860

Applicant(s)

SRIDHAR ET AL.

Examiner

Nghi V. Tran

Art Unit

2151

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 18 April 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) 14 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☒ Claim(s) 10 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 01/07/2002.
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Election/Restrictions***

1. Applicant's election without traverse of Group I, claims 1-13, in the reply filed on April 18, 2005 is acknowledged.
2. Claim 14 is withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected Group II, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on April 18, 2005.

### ***Specification***

3. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

### ***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States

only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1-9 and 11-13 are rejected under 35 U.S.C. 102(e) as being anticipated by Roberts, U.S. Patent No. 6,574,195.

6. With respect to claim 1, Roberts teaches communication system for implementing an overall communication policy [see abstract and fig.2] comprising:

- a first interface [i.e. micro-flow A-D from computer system 110A-D] for accepting a first plurality of separate communication links forming a first trunked [col.7, lns.3-5] communication link [i.e. micro-flow A-D];
- a second communication interface [i.e. micro-flow A-D to computer system 110E-H] for accepting a second plurality of separate communication links forming a second trunked communication link [col.7, ln.46 - col.8, ln.8]; and
- a plurality of processors [220 i.e. switches], each coupled to a corresponding different one of the first plurality of separate communication links and coupled to a corresponding different one of the second plurality of communication links, and coupled to one another over a communication channel [fig.2];
- wherein each processor in the plurality of processors is configured to implement a separate communication policy [col.7, lns.47-48] for data passing between the first trunked communication link and a corresponding one of the second plurality of communication links such that together the separate communication policies approximate the overall communication policy, and wherein the plurality of processors are further configured to communicate

among one another to adjust the separate communication policies [col.7, Ins.53-64] to adapt to data flows passing through the processors [col.7, ln.15 - col.8, ln.20].

7. With respect to claim 2, Robert further teaches adapting to data flows includes a first processor in the plurality of processors borrowing bandwidth [i.e. composite flow A+B or composite flow C+D] from a second processor in the plurality of processors [fig.1A].

8. With respect to claim 3, Robert further teaches each processor in the plurality of processors has a copy of each communication policy in the communication system and communicates with the other processors in the plurality of processors to keep state information current [i.e. updates] for each such copy [col.14, Ins.13-30].

9. With respect to claim 4, Robert further teaches the plurality of processors is divided into a plurality of active processors [i.e. primary route] and a plurality of standby processors [i.e. an alternative route], such that each processor in the plurality of active processors actively implements a communication policy on data, while a standby processor in the plurality of standby processors monitors the plurality of active processors for a failure on an active processor [col.14, Ins.13-30], and upon detecting the failure the standby processor joins the plurality of active processors, thus

Art Unit: 2151

implementing the overall communication policy [col.14, Ins.13-67 i.e. fault tolerance or redundancy].

10. With respect to claim 5, Robert further teaches each processor in the plurality of processors mirrors state information for reporting across the communication system [col.7, ln.53 - col.8, ln.8 i.e. load balancing].

11. With respect to claim 6, Robert further teaches each processor in the plurality of processors mirrors state information for management across the communication system [col.7, ln.53 - col.8, ln.8 i.e. load balancing the trunk lines over the entire network].

12. With respect to claim 7, Robert further teaches the overall communication policy is only implemented for traffic traveling from the first interface to the second communication interface [col.9, Ins.27-51 and col.6, Ins.42-61].

13. With respect to claim 8, Robert further teaches the overall communication policy is implemented for traffic traveling between the first interface and the second communication interface in either direction [fig.2; col.6, ln.32 - col.7, ln.15; and col.7, ln.53 - col.8, ln.20].

14. With respect to claim 9, Robert teaches a communication system for implementing a communication policy comprising:

Art Unit: 2151

- a first communication link [i.e. mirco-flow A-D between computer system 110A-D and switch 220];
- a second communication link [i.e. micro-flow A-D between computer system 110E-H and switch 220];
- a first processor coupled to the first and second communication links, configured to implement the communication policy for data passing between the first communication link and the second communication link [fig.2]; and
- a second processor coupled to the first and second communication links, the second processor in communication with the first processor to maintain a mirror configuration on the second processor to implement the communication policy in a standby status relative to the first processor [fig.2];
- wherein the first processor implements the communication policy until the second processor detects a failure in the first processor, at which time the second processor implements the communication policy [col.14, Ins.13-67 i.e. fault tolerance or redundancy].

15. With respect to claim 11, Robert teaches a communication system for implementing an overall communication policy comprising:

- a first communication link [i.e. mirco-flow A-D between computer system 110A-D and switch 220];
- a second communication link [i.e. micro-flow A-D between computer system 110E-H and switch 220];

- a plurality of processors [220 i.e. switches], each processor in the plurality of processors configured to implement the communication policy for data passing between the first communication link and the second communication link [fig.2];
- a first plurality of aggregator/disaggregator network devices [220 on computer system 110A-D side] arranged between the plurality of processors and the first communication link [fig.2];
- a second plurality of aggregator/disaggregator network devices [220 on computer system 110E-H side] arranged between the plurality of processors and the second communication link [fig.2];
- a first mesh, including a plurality of network links such that a link in the plurality of network links exists to join each processor in the plurality of processors to each aggregator/disaggregator in the first plurality of aggregator/disaggregator network devices [fig.2 i.e. mesh is interpreted as network of 200]; and
- a second mesh, including a plurality of network links such that a link in the plurality of network links exists to join each processor in the plurality of processors to each aggregator/disaggregator in the second plurality of aggregator/disaggregator network devices [fig.2 i.e. mesh is interpreted as network of 200];
- wherein each processor in the plurality of processors is configured to implement a separate communication policy for data passing between the first



communication link via a first aggregator/disaggregator in the first plurality of aggregator/disaggregator network devices and the second communication link via a corresponding one of the second plurality of aggregator/disaggregator network devices, such that together the separate quality-of-service policies approximate the overall communication policy, and wherein the plurality of processors are further configured to communicate among one another to adjust the separate communication policies to adapt to data flows passing through the processors [fig.2; col.6, ln.32 - col.7, ln.15; and col.7, ln.53 - col.8, ln.20].

16. With respect to claim 12, Robert further teaches each processor in the plurality of processors has a copy of each communication policy in the communication system and communicates with the other processors in the plurality of processors to keep state information current [i.e. update] for each such copy [col.14, lns.13-30].

### ***Claim Rejections - 35 USC § 103***

17. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

18. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Robert.

19. With respect to claim 10, Robert teaches in response to the failure in the first processor.

However, Robert does not explicitly teach in response to the failure in the first processor, the first processor places itself in a standby status relative to the second processor.

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to place the first processor in a standby status relative to the second processor in response to the failure in the first processor because the reference suggests to provide a continuously monitoring the status of processors [Robert, col.14, lns.13-37]. It is for this reason that one of ordinary skill in the art at the time of the invention would have been motivated in order to ensure a high level of fault tolerance [Robert, col.14, lns.50-52].

### ***Allowable Subject Matter***

20. Claim 13 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

### ***Conclusion***

21. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Art Unit: 2151

- a. "Interworking of addressing in an internetwork," by Muñoz et al., U.S.

Patent No. 6,741,585.

- b. "Distributed connection-oriented services for switched communications networks," by Dobbins et al., U.S. Patent No. 5,825,772.

22. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nghi V. Tran whose telephone number is (571) 272-4067. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Zarni Maung can be reached on (571) 272-3939. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Nghi V Tran  
Patent Examiner  
Art Unit 2151

NT

  
**ZARNI MAUNG**  
SUPERVISORY PATENT EXAMINER